

AMENDMENTS TO THE DRAWINGS

Attached hereto are two sheets of corrected drawings that comply with the provisions of 37 C.F.R. § 1.84. In the corrected drawings, Figures 6, 7, 8 and 9 are relabeled as Figures 8, 9, 6 and 7 to enhance consistencies with the specification. Applicant respectfully request that the corrected formal drawings be approved and made apart of the record of the above-identified application.

REMARKS

Reconsideration and allowance of the present application are respectfully requested in view of the following remarks. Claims 1-20 were pending prior to the Final Office Action. In this reply, claims 14-16 are cancelled and claims 21-39 are added. Therefore, claims 1-13 and 17-39 are pending. Claims 1 and 20 are independent.

§ 112, 1ST PARAGRAPH REJECTION

Claims 2-13 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. These claims are amended to address a clerical issue, which thereby addresses the rejection as well. Applicants respectfully request that the rejection of claims 2-13 based on § 112, first paragraph be withdrawn.

§ 103 REJECTION – MOROFUJI, OHKAWARA

Claim 1 stands rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over Morofuji et al. (US Patent 6,208,377) in view of Ohkawara et al. (US Patent 6,630,950). Applicant respectfully traverses.

Independent claim 1 recites, in part “a vibration isolator that prevents an image blur due to a vibration of a camera ... comprising ... a correcting device that corrects the integrated value calculated by the integrating device to

substantially zero when the differentiated value calculated by the differentiating device is substantially zero” and “a controlling device that controls a position of the correcting optical system according to the integrated value to thereby prevent the image blur due to the vibration of the camera.” In other words, the correcting device corrects the integrated value and the controlling device control the position of the correcting optical system to prevent the image blur caused by a vibration of the camera.

The Examiner alleges that Morofuji teaches the feature of correcting the integrated value to substantially zero when the differentiated value is zero and points to column 23, lines 22-43 of Morofuji. The Examiner reliance on Morofuji is misguided.

The relied upon portion of Morofuji - that is column 23, lines 22-43 - is a part of Morofuji that describes the device as illustrated in Figure 22. In particular, the device includes a microcomputer COM2 that receives an angular velocity signal and outputs a correcting signal to the driving circuit 308. The angular velocity signal is digitized and the digitized velocity signal is supplied to a high pass filter 310 and to a panning/tilting decision circuit 312. The output of the high pass filter 310 is supplied to an integrator 305, which integrates the digitized velocity signal to output an angular displacement signal. The angular displacement signal is supplied to a phase and gain correcting circuit which

outputs the correcting signal to be supplied to the driving circuit 308 after undergoing a digital to analog conversion.

Column 23, lines 22-43 relied upon by the Examiner describes the operation of the panning/tilting decision circuit 312. More specifically, Morofuji discloses that the panning/tilting decision circuit 312 determines whether or not a panning or tilting has occurred based on the velocity signal detected by the angular-velocity detector 301. If the occurrence of panning/tilting is detected, the variable angle prism (VAP – allegedly equivalent to the correcting optical system as recited) is progressively moved toward a center of its moving range.

Detecting whether or not panning or tilting has occurred is in no way equivalent to correcting for a vibration of a camera. As any one of ordinary skill would realize, panning or tilting is a purposeful motion of the camera, i.e. the motion is desired, and should not be corrected. In contrast, the claimed device corrects for unwanted vibration motions of the camera. In other words, the panning and tilting decision circuit operation is not analogous to the feature as claimed.

Clearly, Morofuji cannot teach or suggest the features of “a correcting device that corrects the integrated value calculated by the integrating device to substantially zero when the differentiated value calculated by the differentiating device is substantially zero” and “a controlling device that

controls a position of the correcting optical system according to the integrated value to thereby prevent the image blur due to the vibration of the camera” as recited. Ohkawara is not relied upon to correct for this deficiency of Morofuji. This is sufficient to distinguish claim 1 over the combination of Morofuji and Ohkawara.

Further, Morofuji discloses that when the panning/tilting decision circuit 312 determines that the panning or tilting has occurred, the low-frequency cut-off frequency of the high pass filter 310 is shifted toward a higher-frequency side, to thereby alter the characteristics of the high pass filter 310. This prevents the image-signal correcting system from responding to a vibration of low-frequency. *See column 23, lines 30-36.* In other words, the system is made less sensitive to low frequency motions include those motions that are resultant from panning and tilting.

However, Morofuji further discloses that during this time, the detection of the angular-velocity signal and the angular-displacement signal is continued. As seen in Figure 22, the higher frequency components that is not blocked by the high pass filter 310 is still provided to the integrator 305 which outputs the integrated angular displacements signal to the phase and gain correcting circuit 311 for image-shake control. In other words, the image-shake control occurs regardless of whether or not panning or tilting is determined. This is

contrary to the feature of the correcting device that corrects the integrated value when the differentiated value is substantially zero as recited in claim 1.

Yet further, the Examiner alleges that the panning/tilting determination as disclosed in Ohkawara can replace the panning/tilting determination of Morofuji. In particular, the Examiner relies upon column 28, lines 35-50 of Ohkawara for the particulars of determining whether panning has occurred. This reliance of Ohkawara is also misguided.

The relied upon portion of Ohkawara describes Figures 29A and 29B of Ohkawara. As illustrated, Ohkawara discloses that a beginning of panning is determined when the angular acceleration signal level is equal to or higher than a predetermined level for a duration that is equal to or longer than a predetermined time τ . *See column 28, lines 35-40.* In other words, as disclosed in Ohkawara, **panning is determined to occur only when the angular acceleration is non-zero.** This completely contradicts the claimed feature where the correcting device corrects the integrated value when the differentiated value, i.e. the acceleration value, is substantially zero.

For at least the above stated reasons, the combination of Morofuji and Ohkawara cannot teach or suggest all features of independent claim 1. Accordingly, claim 1 is distinguishable over Morofuji and Ohkawara. Applicants respectfully request that the rejection of claim 1 based on Morofuji and Ohkawara be withdrawn.

§ 103 REJECTION – MOROFUJI, OHKAWARA, MIYAMOTO

Claims 2-5 and 10-13 stand rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over Morofuji, Ohkawara and in further view of Miyamoto et al. (US Patent 6,332,060). Applicants respectfully traverses.

Claims 2-5 and 10-13 depend from independent claim 1 directly or indirectly, and it is demonstrated above that claim 1 is distinguishable over the combination of Morofuji and Ohkawara. Miyamoto is not relied upon to correct for at least the above noted deficiencies of Morofuji and Ohkawara. Therefore, claim 1 is distinguishable over the combination of Morofuji, Ohkawara and Miyamoto. Accordingly, claims 2-5 and 10-13 are also distinguishable over the same combination.

Moreover, these claims are distinguishable on their own merit. The Examiner admits that the combination of Morofuji and Ohkawara cannot teach or suggest the feature of wherein the controlling device keeps the vibration isolating device at a predetermined position until a predetermined time passes after the switching device turns on the vibration isolation and moves the vibration isolating device according to the vibration after the predetermined time passes. Contrary to the Examiner's allegation, Miyamoto cannot teach or suggest this feature.

More specifically, the Examiner relies upon Figure 23 and column 34, lines 6-31 of Miyamoto. Figure 23 discloses a vibration compensation lens centering process. In step S1305, Miyamoto discloses that a set time is waited. Apparently, the Examiner appears to be under the impression that the vibration compensation lens is not moving during this time.

However, Miyamoto discloses that in step S1302, the vibration compensation lens centering process interruption time-up time is set. The setting time is always set so that the vibration compensation lens 113 is driven to the center position in the time period that has been set. *See column 33, lines 63-67.* In step S1305, this setting time that has been set is merely waited. During this time, the vibration compensation lens is moving. This is in complete contrast to claim 2 which recites that the controlling device keeps the vibration isolating device at a predetermined position until a predetermined time passes. Clearly, Morofuji cannot teach or suggest the above recited feature. Indeed, Morofuji actually teaches away from this feature.

For at least the above stated reasons, Applicants respectfully request that the rejection of claims 2-5 and 10-13 based on Morofuji, Ohkawara and Miyamoto be withdrawn.

§ 103 REJECTION – MOROFUJI, OHKAWARA, IMAFUJI

Claims 6-7 and 9 stand rejected under 35 U.S.C. § 103 (a) as allegedly being unpatenable over Morofuji, Ohkawara and in further view of Imafuji et al. (US Patent 5,617,177). Applicant respectfully traverses.

Claims 6-7 and 9 depend from independent claim 1 directly or indirectly, and it is demonstrated above that claim 1 is distinguishable over Morofuji and Ohkawara. Imafuji is not relied upon to correct for at least the above noted deficiencies of Morofuji and Ohkawara. Therefore, claim 1 is also distinguishable over the combination of Morofuji, Ohkawra and Imafuji. Accordingly, claims 6-7 and 9 are also distinguishable over the same combination.

Applicant respectfully requests that the rejection of claims 6-7 and 9 based on Morofuji, Ohkawara and Imafuji be withdrawn.

§ 103 REJECTION – MOROFUJI, OHKAWARA, IMAFUJI, MIYAMOTO

Claim 8 stands rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over Morofuji, Ohkawara, and in further view of Imafuji and Miyamoto. Applicant respectfully traverses.

Claim 8 directly depends from claim 6 and it is demonstrated above that claim 6 and is distinguishable over the combination of Morofuji, Ohkawara and Imafuji. Miyamoto is not relied upon to correct for at least the above noted

deficiencies of the same combination. Therefore, claims 6 is distinguishable over the combination of Morofuji, Ohkawara, Imafuji and Miyamoto. Accordingly, claim 8 is also distinguishable over the same references.

Applicants respectfully requests that the rejection of claim 8 based on Morofuji, Ohkawara, Imafuji and Miyamoto be withdrawn.

§ 103 REJECTION – MOROFUJI, OHKAWARA, TERUI

Claim 18 stands rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over Morofuji, Ohkawara and in further view of Terui et al. (US Patent 5,717,611). Applicant respectfully traverses.

Claim 18 depends from claim 1 and it is demonstrated above that claim 1 is distinguishable over the combination of Morofuji and Ohkawara. Terui is not relied upon to correct for at least the above noted deficiencies of the same combination. Therefore, claim 1 is distinguishable over the combination of Morofuji, Ohkawara and Terui. Accordingly, claim 18 is also distinguishable over the same references.

More over, Terui cannot be combined with Morofuji and Ohkawara as suggested by the Examiner. More specifically, Morofuji discloses that a high pass filter is used to eliminate a direct-current component of an angular velocity signal. *See column 22, lines 50-66.* On the other hand, if the high pass filter as disclosed in Morofuji is replaced with the low pass filter as disclosed in

Terui as suggested by the Examiner, then the direct-current component of the velocity signal would not be eliminated. This renders Morofuji unsatisfactory for its intended purpose. Then by definition, there is no motivation to combine Terui with Morofuji and Ohkawara as Examiner suggests, and any rejection based on a combination of references that includes Morofuji and Terui cannot stand.

For at least the above stated reasons, applicants respectfully request that the rejection of claim 18 based on Morofuji, Ohkawara and Terui be withdrawn.

§ 103 REJECTION – OKAZAKI, MOROFUJI

Claim 20 stands rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over Okazaki et al. (US Patent 5,794,078) in view of Morofuji. Applicant respectfully traverses.

The Examiner admits that Okazaki does not teach or suggest the feature of a correcting device that corrects the twice-integrated value calculated by the integrating device to substantially zero when the acceleration value determined by the vibration acceleration determining device is substantially zero. It logically follows that Okazaki cannot teach or suggest the feature of the correcting device that corrects the twice-integrated value calculated by the integrating device to substantially zero when the acceleration value determined by the vibration acceleration determining device is substantially zero.

The Examiner also admits that Okazaki does not teach or suggest the feature of the controlling device that controls the position according to the corrected twice-integrated value as recited in claim 20.

However, in contrast with the Examiner's allegation, Morofuji cannot be relied upon to correct for at least the above-noted deficiencies of Okazaki. Therefore, claim 20 is distinguishable over Okazaki and Morofuji.

Applicant respectfully requests that the rejection of claim 20 based on Okazaki and Morofuji be withdrawn.

NEW CLAIMS

Claims 21-39 are added in this reply. No new matter is presented. The new claims are distinguishable for at least due to the dependencies from independent claims 1 and 20. Applicants respectfully request that the new claims be allowed.

CONCLUSION

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Hyung Sohn (Reg.

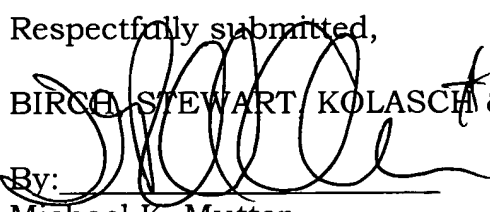
No. 44,346), to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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